

CLAIMS:

1. A golf ball comprising a core, an intermediate layer enclosing the core to form a sphere, and a cover enclosing the intermediate layer, wherein each component has a Shore D hardness, a Deflection amount, an initial velocity (in m/s) and a thickness (in mm), the Deflection amount being defined as an amount of deflection (in mm) under load of a spherical body incurred when the load is increased from an initial value of 98 N (10 kgf) to a final value of 1275 N (130 kgf), and the ball satisfies the following requirements (1) to (4):

5 (1) (Shore D hardness of the cover) - (Shore D hardness of the intermediate layer) > 0,

10 (2) (initial velocity of the sphere) - (initial velocity of the core) > 0,

15 (3) $0.90 \leq (\text{Deflection amount of the sphere}) / (\text{Deflection amount of the core}) \leq 1.00$, and

(4) the total of the thickness of the intermediate layer and the thickness of the cover is up to 3.0 mm.

20 2. The golf ball of claim 1 which further satisfies the following requirements (5) to (9):

(5) the thickness of the cover is from 0.5 mm to 2.0 mm,

(6) the Shore D hardness of the cover is from 55 to 70,

25 (7) the thickness of the intermediate layer is from 0.5 mm to 1.6 mm,

(8) the Shore D hardness of the intermediate layer is from 40 to 60, and

(9) the golf ball has an initial velocity of at least 76.5 m/s.

30 3. The golf ball of claim 1 which further satisfies the following requirement (10):

(10) the cover has a melt flow rate of at least 2 g/10 min.

4. The golf ball of claim 1 which further satisfies the following requirement (11):

(11) $0.85 \leq (\text{Deflection amount of the golf ball}) / (\text{Deflection amount of the sphere}) \leq 0.95$.

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5. The golf ball of claim 1 wherein said intermediate layer comprises

(A) an ionomer resin comprising (a-1) an olefin/unsaturated carboxylic acid binary random copolymer and/or a metal ion neutralized product thereof and (a-2) an olefin/unsaturated carboxylic acid/unsaturated carboxylic acid ester ternary random copolymer and/or a metal ion neutralized product thereof in a weight ratio (a-1)/(a-2) between 100/0 and 0/100, and

15 (B) a non-ionomeric thermoplastic elastomer in a weight ratio A/B between 100/0 and 50/50.

6.. The golf ball of claim 5 wherein said intermediate layer is made of a mixture comprising

20 100 parts by weight of a resin component comprising the ionomer resin (A) and the non-ionomeric thermoplastic elastomer (B) in a weight ratio A/B between 100/0 and 50/50,

25 (C) 5 to 80 parts by weight of an organic fatty acid and/or a derivative thereof having a molecular weight of 280 to 1,500, and

(D) 0.1 to 10 parts by weight of a basic inorganic metal compound capable of neutralizing un-neutralized acid groups in said resin component and component (C).